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UNITED STATES DEPARTMENT OF COMMERCE
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
08/833,106	04/04/97	SMALL J	74892MSS

001333 WM02/0727
PATENT LEGAL STAFF
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EXAMINER	
WHITE, M	
ART UNIT	**PAPER NUMBER**
2612	25

DATE MAILED: 07/27/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.	Applicant(s)
08/833,106	Small
Examiner	**Art Unit**
Mitchell White	2612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on May 7, 2001

2a) ☒ This action is **FINAL.** 2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) 2-4, 11-13, and 25 is/are pending in the applica

4a) Of the above, claim(s) _____ is/are withdrawn from considera

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) 2-4, 11-13, and 25 is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirem

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

a) ☐ All b) ☐ Some* c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

15) ☐ Notice of References Cited (PTO-892)

16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____

18) ☐ Interview Summary (PTO-413) Paper No(s). _____

19) ☐ Notice of Informal Patent Application (PTO-152)

20) ☐ Other:

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 5/7/01 have been fully considered but they are not persuasive.

Applicant argues that the Ohta reference (US 6,108,008) is merely another color management patent that describes processing on a host personal computer (not in a digital camera) to compensate for a particular printer. However, as will be seen in the art rejection below, Ohta discloses that the image processing system may be used in an image input device such as a scanner (col. 3, lines 46-50) which is equivalent to a camera. Thus, Ohta does suggest color processing in a camera.

Applicant argues that the Ohta reference (US 6,108,008) has a printer condition setting means which is not part of the printer. Therefore, information that is received by the camera from the printer condition setting means via a totally separate and different interface from the camera/printer interface that is used to download images from the camera to the printer. However, as will be seen in the art rejection below, as aforementioned, the color processing of Ohta may be exhibited in a camera and the printer condition setting means acts an a printer interface for the Ohta color processing system by setting various output conditions of the printer (col. 4, lines 16-22). Therefore, printer condition setting means interface would be the camera/printer interface.

Claim Rejections - 35 USC § 103

2. ***The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.***

3. **Claim 2-4, 11-13, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koike et al. in view Ohta (US 6,108,008).**

Regarding claim **4**, Koike et al. discloses, in fig. 1, a color image reading apparatus in which an image is formed on a multi-chip image sensor (5), converted into an electrical signal, and applied to a head amplifier section (6), where it is digitized and amplified. The image signal is then sent to a signal processing section (7) where it is initially processed and stored in memory (8, col. 4, lines 37-45). The image signal data is then compressed by the CPU (11) and stored in memory (12, col. 5, lines 54-58). Koike et al. further discloses a memory (13) which is a nonvolatile memory (col. 6, lines 37-43) that stores color correcting coefficients calculated by CPU (11) which allows for compensation of color reproducing characteristics of output equipment such as a printer such as color space transformation (col. 2, lines 10-22) by using the CPU (11) and the stored correction coefficients stored in memory (13) to correct the image data (col. 6, lines 8-26). Since Koike et al. discloses compensating for output equipment such as a printer, a printer interface is inherent in the Koike et al. image reading apparatus. Koike et al. does not explicitly state that the image data is decompressed. However, it would have been obvious to decompress the image data in order to use the processed image data. Koike et al. does not explicitly stated that memory (12) is a nonvolatile memory. However, it would have been

obvious for memory (12) to be a nonvolatile memory so that the image data would not be lost due to power failure. Koike et al. does not disclose a first and second color transformation or a printer interface for receiving process color and printing process parameters from different printers having different predetermined processes. Ohta discloses a first color space transformation and compression transforming R, G, B values into L*a*b* values then further converting into L*'a*'b*' and then to R, G, B values which are displayed which infers decompression (col. 9, lines 1-21). Therefore, it would have been obvious to modify the Koike et al. image reading apparatus to include a first and second color space transformations as taught by Ohta to exactly reproduce the desired color and to achieve previewing on the monitor. Ohta further discloses an image processing system that may be used in an image input device such as a scanner (col. 3, lines 46-50) which is equivalent to a camera. The image processing of Ohta may be exhibited in a camera and the printer condition setting means acts an a printer interface for the Ohta color processing system by setting various output conditions of the printer (col. 4, lines 16-22). Ohta further discloses, in fig. 2, an image processing apparatus which includes a printer condition setting means (9) used to set various output conditions of the connected printer, or the parameters relating to the color process defined and contains printer setting means (8) for setting the kind of the connected printer and binarization method setting means (6) for setting the binarizing method to be employed in the printer (col. 4, lines 16-22). The output profile memory (7) stores the output profile representing the printer characteristics (col. 4, lines 53-60). Therefore, it would have been obvious to modify the Koike et al. image reading apparatus to

printer interface for receiving process color and printing process parameters from different printers having different predetermined processes to provide the convenience of interchangeable printers.

Regarding claim **2**, Koike et al. discloses, in fig. 1, a memory (13) which stores correction coefficients used to correct image data (col. 5, lines 23-30).

Regarding claim **3**, Koike et al. performing error diffusion in response to a requisition from a printer and controlling a series of operations from the processing of the signals from the color original with the CCD sensor up to the transmitting of the signals through the error diffusing circuit (col. 1, lines 33-40).

Regarding claim **11**, Koike et al. discloses, in fig. 1, a color image reading apparatus in which an image is formed on a multi-chip image sensor (5), converted into an electrical signal, and applied to a head amplifier section (6), where it is digitized and amplified. The image signal is then sent to a signal processing section (7) where it is initially processed and stored in memory (8, col. 4, lines 37-45). The image signal data is then compressed by the CPU (11) and stored in memory (12, col. 5, lines 54-58). Koike et al. further discloses a memory (13) which is a nonvolatile memory (col. 6, lines 37-43) that stores color correcting coefficients calculated by CPU (11) which allows for compensation of color reproducing characteristics of output equipment such as a printer such as color space transformation (col. 2, lines 10-22) by using the CPU (11) and the stored correction coefficients stored in memory (13) to correct the image data (col. 6, lines 8-26). Since Koike et al. discloses compensating for output equipment such as a

printer, a printer interface is inherent in the Koike et al. image reading apparatus. Koike et al. does not explicitly state that the image data is decompressed. However, it would have been obvious to decompress the image data in order to use the processed image data. Koike et al. does not explicitly stated that memory (12) is a nonvolatile memory. However, it would have been obvious for memory (12) to be a nonvolatile memory so that the image data would not be lost due to power failure. Koike et al. does not disclose color filter interpolation, first and second color transformations, or a printer interface for receiving process color and printing process parameters from different printers having different predetermined processes. However, Ohta discloses color filter interpolation (col. 6, lines 55-61). Therefore, it would have been obvious to modify the Koike et al. image reading apparatus to include color filter interpolation as taught by Ohta to reduce the number of calculation required for the color measurements in the LUT. Ohta discloses a first color space transformation and compression transforming R, G, B values into L*a*b* values then further converting into L*'a*'b*' and then to R, G, B values which are displayed which infers decompression (col. 9, lines 1-21). Therefore, it would have been obvious to modify the Koike et al. image reading apparatus to include a first and second color space transformations as taught by Ohta to exactly reproduce the desired color and to achieve previewing on the monitor. Ohta further discloses an image processing system that may be used in an image input device such as a scanner (col. 3, lines 46-50) which is equivalent to a camera. The image processing of Ohta may be exhibited in a camera and the printer condition setting means acts an a printer interface for the Ohta color processing system by setting various output conditions of the

printer (col. 4, lines 16-22). Ohta further discloses, in fig. 2, an image processing apparatus which includes a printer condition setting means (9) used to set various output conditions of the connected printer, or the parameters relating to the color process defined and contains printer setting means (8) for setting the kind of the connected printer and binarization method setting means (6) for setting the binarizing method to be employed in the printer (col. 4, lines 16-22). The output profile memory (7) stores the output profile representing the printer characteristics (col. 4, lines 53-60). Therefore, it would have been obvious to modify the Koike et al. image reading apparatus to printer interface for receiving process color and printing process parameters from different printers having different predetermined processes to provide the convenience of interchangeable printers.

Regarding claim **12**, Koike et al. discloses, in fig. 1, a memory (13) which stores correction coefficients used to correct image data (col.5, lines 23-30).

Regarding claim **13**, Koike et al. performing error diffusion in response to a requisition from a printer and controlling a series of operations from the processing of the signals from the color original with the CCD sensor up to the transmitting of the signals through the error diffusing circuit (col. 1, lines 33-40).

Regarding claim **25**, Koike et al. discloses, in fig. 1, a color image reading apparatus in which an image is formed on a multi-chip image sensor (5), converted into an electrical signal, and applied to a head amplifier section (6), where it is digitized and amplified. The image signal is then sent to a signal processing section (7) where it is initially processed and stored in memory (8,

col. 4, lines 37-45). The image signal data is then compressed by the CPU (11) and stored in memory (12, col. 5, lines 54-58). Koike et al. further discloses a memory (13) which is a nonvolatile memory (col. 6, lines 37-43) that stores color correcting coefficients calculated by CPU (11) which allows for compensation of color reproducing characteristics of output equipment such as a printer such as color space transformation (col. 2, lines 10-22) by using the CPU (11) and the stored correction coefficients stored in memory (13) to correct the image data (col. 6, lines 8-26). Since Koike et al. discloses compensating for output equipment such as a printer, a printer interface is inherent in the Koike et al. image reading apparatus. Koike et al. does not explicitly state that the image data is decompressed. However, it would have been obvious to decompress the image data in order to use the processed image data. Koike et al. does not explicitly stated that memory (12) is a nonvolatile memory. However, it would have been obvious for memory (12) to be a nonvolatile memory so that the image data would not be lost due to power failure. Koike et al. does not disclose color filter interpolation, first and second color transformations, or a printer interface for receiving process color and printing process parameters from different printers having different predetermined processes. However, Ohta discloses color filter interpolation (col. 6, lines 55-61). Therefore, it would have been obvious to modify the Koike et al. image reading apparatus to include color filter interpolation as taught by Ohta to reduce the number of calculation required for the color measurements in the LUT. Ohta discloses a first color space transformation and compression transforming R, G, B values into L*a*b* values then further converting into L*'a*'b*' and then to R, G, B values which are displayed

which infers decompression (col. 9, lines 1-21). Therefore, it would have been obvious to modify the Koike et al. image reading apparatus to include a first and second color space transformations as taught by Ohta to exactly reproduce the desired color and to achieve previewing on the monitor. Ohta further discloses an image processing system that may be used in an image input device such as a scanner (col. 3, lines 46-50) which is equivalent to a camera. The image processing of Ohta may be exhibited in a camera and the printer condition setting means acts an a printer interface for the Ohta color processing system by setting various output conditions of the printer (col. 4, lines 16-22). Ohta further discloses, in fig. 2, an image processing apparatus which includes a printer condition setting means (9) used to set various output conditions of the connected printer, or the parameters relating to the color process defined and contains printer setting means (8) for setting the kind of the connected printer and binarization method setting means (6) for setting the binarizing method to be employed in the printer (col. 4, lines 16-22). The output profile memory (7) stores the output profile representing the printer characteristics (col. 4, lines 53-60). Ohta discloses setting the printer profile according to the kind of printer so that color processing can be based on the parameters of the printer (col. 8, lines 4-11) infers connecting a second/different printer which would require second printing process parameters. Therefore, it would have been obvious to modify the Koike et al. image reading apparatus to printer interface for receiving process color and printing process parameters from different printers having different predetermined processes to provide the convenience of interchangeable printers.

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

5. **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 308-9051, (for formal communications intended for entry)

Or:

(703) 872-9314 (for informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mitchell White whose telephone number is (703) 305-8155. The examiner can normally be reached on Monday-Thursday from 8:00 to 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber, can be reached on (703) 305-4929.

Any inquiry of general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-4700.

MLW

July 23, 2001

ANDREW B. CHRISTENSEN
PRIMARY EXAMINER